



## Subject Index to Volume 45

- Acoustic emission, 73, 265
- Aluminium matrix composites, 233, 307
- Antisymmetric laminate, 181
- Average stress criterion, 105
- Axial strain, 65
  
- Bending, 323
- Biaxial compression, 125
- Buckling, 55, 125, 201
- Buckling (thermal), 181
- Buckling force, 37
  
- Carbon fibre, 1, 9, 233
- Carbon/carbon composites, 65, 198
- CFRP, 23, 111, 161, 257, 265, 283, 313
- Cladding, 257
- Composite laminate, 105
- Composite plates, 229
- Compression failure, 201
- Compression properties, 37, 189
- Contact analysis, 323
- Contact problems, 241
- Cracks, 43
- Creep rupture, 209
- Cylindrical composites, 189
  
- Debonding, 65
- Delamination, 65, 229
- Diffusion, 257
- Double-lap shear test, 161
- Dynamic analysis, 17
- Dynamic loading, 241
  
- Elastic behaviour (woven fabric composites), 135
- Elastic constants, 135
- Elastic foundation, 37
- Elastic properties, 293
- Elastic-plastic behaviour, 241
- Energy approach, 125
- Energy balance, 89
- Environmental behaviour, 257
- Expansion anisotropy, 307
- Expansion coefficients, 111
  
- Fabric reinforcement, 23
- Fabrication, 209
- Failure, 65
- Fatigue, 283
- FEA (See finite element analysis)
- Fibre coatings, 293
- Fibre fragmentation, 73
- Fibre pull-out, 265
- Fibre skeleton structure, 221
- Fibre/matrix interaction, 233
- Filament-wound pipes, 17
- Finite element analysis (FEA), 161, 313, 323
- Finite width, 117
- Fracture, 23, 43, 117, 229, 257, 265, 313
- Fracture mechanics, 153, 229, 265
- Fracture models, 105
- Free edge behaviour, 189
- Frictional pull-out stress, 153
  
- Gel permeation chromatography, 335
- GRP, 17, 161, 201, 257, 283
  
- High-rate deformation, 241
- Higher-order displacement field, 181
- Holes, 43
- Hybrid composites, 257
- Hysteretic heating, 283
  
- Impact, 17, 161, 241
- In-plane expansion coefficient, 111
- Infiltration, 233
- Infinite cluster, 221
- Initial debond stress, 153
- Injection mouldings, 43
- Interface, 9
- Interfacial adhesion, 9
- Interfacial fracture energy, 89
- Interfacial shear strength, 9
- Interfacial strength, 73
- Interlaminar expansion coefficient, 111
- Interlaminar shear, 161, 313
- Internal crystallization, 209
- Interphase, 293
- Irradiation, 247
  
- J integral, 265
  
- Laminated plates, 125, 241
- Laminates, 257, 313
- Low cycle fatigue, 65
  
- Manufacturing, 247
- Mass-spring models, 17
- Maximum debond stress, 153
- Mechanical properties, 247, 347
- Microbuckling, 37
- MMC, 72, 117, 209, 233, 307
- Morphology, 1, 335
- Moulded-in notches, 43
  
- NMR, 335
- Non-linear materials, 323
- Notch sensitivity, 43
- Notched strength, 43, 105
- Numerical analysis, 241
  
- Openings, 229
- Optimization, 233
- Orthotropic rings, 111
- Overall buckling, 55
- Oxide fibres, 209
  
- PE/PE composites, 247
- Percolation threshold, 221
- Pipes, 17
- Plain weave fabric, 135, 283
- Plasma etching, 1, 9
- Plasticity, 117
- Plates, 125
- PMR-15, 265
- Point stress criterion, 105
- Polyamide matrix composites, 43
- Polyethylene/polyethylene composites, 247
- Polyimides, 265
- Polyurethane matrix, 335, 345
- Post-buckling, 55
- Prediction of properties, 135
- Processing, 335, 345
- Processing/property relationship, 265
- PU block co-polymers, 335
- Pull-out, 89, 265
- Pultrusion, 335, 345
  
- Random fibre composite, 221
- Rayleigh–Ritz method, 125
- Resistance, 221
  
- Sandwich plates, 55
- Shear delamination cracks, 229
- Shear lag analysis, 117
- Shear properties, 189, 313
- Sheet stamping, 241
- Short-fibre composite, 43, 221
- SiC/Al composites, 73
- Single crystal samples, 73
- Single fibre pull-out test, 89, 153
- Splitting, 201



## Subject Index to Volume 45

- Acoustic emission, 73, 265
- Aluminium matrix composites, 233, 307
- Antisymmetric laminate, 181
- Average stress criterion, 105
- Axial strain, 65
  
- Bending, 323
- Biaxial compression, 125
- Buckling, 55, 125, 201
- Buckling (thermal), 181
- Buckling force, 37
  
- Carbon fibre, 1, 9, 233
- Carbon/carbon composites, 65, 198
- CFRP, 23, 111, 161, 257, 265, 283, 313
- Cladding, 257
- Composite laminate, 105
- Composite plates, 229
- Compression failure, 201
- Compression properties, 37, 189
- Contact analysis, 323
- Contact problems, 241
- Cracks, 43
- Creep rupture, 209
- Cylindrical composites, 189
  
- Debonding, 65
- Delamination, 65, 229
- Diffusion, 257
- Double-lap shear test, 161
- Dynamic analysis, 17
- Dynamic loading, 241
  
- Elastic behaviour (woven fabric composites), 135
- Elastic constants, 135
- Elastic foundation, 37
- Elastic properties, 293
- Elastic-plastic behaviour, 241
- Energy approach, 125
- Energy balance, 89
- Environmental behaviour, 257
- Expansion anisotropy, 307
- Expansion coefficients, 111
  
- Fabric reinforcement, 23
- Fabrication, 209
- Failure, 65
- Fatigue, 283
- FEA (See finite element analysis)
- Fibre coatings, 293
- Fibre fragmentation, 73
- Fibre pull-out, 265
- Fibre skeleton structure, 221
- Fibre/matrix interaction, 233
- Filament-wound pipes, 17
- Finite element analysis (FEA), 161, 313, 323
- Finite width, 117
- Fracture, 23, 43, 117, 229, 257, 265, 313
- Fracture mechanics, 153, 229, 265
- Fracture models, 105
- Free edge behaviour, 189
- Frictional pull-out stress, 153
  
- Gel permeation chromatography, 335
- GRP, 17, 161, 201, 257, 283
  
- High-rate deformation, 241
- Higher-order displacement field, 181
- Holes, 43
- Hybrid composites, 257
- Hysteretic heating, 283
  
- Impact, 17, 161, 241
- In-plane expansion coefficient, 111
- Infiltration, 233
- Infinite cluster, 221
- Initial debond stress, 153
- Injection mouldings, 43
- Interface, 9
- Interfacial adhesion, 9
- Interfacial fracture energy, 89
- Interfacial shear strength, 9
- Interfacial strength, 73
- Interlaminar expansion coefficient, 111
- Interlaminar shear, 161, 313
- Internal crystallization, 209
- Interphase, 293
- Irradiation, 247
  
- J integral, 265
  
- Laminated plates, 125, 241
- Laminates, 257, 313
- Low cycle fatigue, 65
  
- Manufacturing, 247
- Mass-spring models, 17
- Maximum debond stress, 153
- Mechanical properties, 247, 347
- Microbuckling, 37
- MMC, 72, 117, 209, 233, 307
- Morphology, 1, 335
- Moulded-in notches, 43
  
- NMR, 335
- Non-linear materials, 323
- Notch sensitivity, 43
- Notched strength, 43, 105
- Numerical analysis, 241
  
- Openings, 229
- Optimization, 233
- Orthotropic rings, 111
- Overall buckling, 55
- Oxide fibres, 209
  
- PE/PE composites, 247
- Percolation threshold, 221
- Pipes, 17
- Plain weave fabric, 135, 283
- Plasma etching, 1, 9
- Plasticity, 117
- Plates, 125
- PMR-15, 265
- Point stress criterion, 105
- Polyamide matrix composites, 43
- Polyethylene/polyethylene composites, 247
- Polyimides, 265
- Polyurethane matrix, 335, 345
- Post-buckling, 55
- Prediction of properties, 135
- Processing, 335, 345
- Processing/property relationship, 265
- PU block co-polymers, 335
- Pull-out, 89, 265
- Pultrusion, 335, 345
  
- Random fibre composite, 221
- Rayleigh–Ritz method, 125
- Resistance, 221
  
- Sandwich plates, 55
- Shear delamination cracks, 229
- Shear lag analysis, 117
- Shear properties, 189, 313
- Sheet stamping, 241
- Short-fibre composite, 43, 221
- SiC/Al composites, 73
- Single crystal samples, 73
- Single fibre pull-out test, 89, 153
- Splitting, 201

- Stability, 125  
Stepwise fracture, 23  
Stiffness, 293  
Stochastically reinforced composite, 221  
Strain rate, 313  
Strength, 43, 209, 293  
Stress corrosion, 257  
Stress field intensity, 105  
Stress relaxation, 307  
Structure, 209  
Structure/properties relationship, 233  
Surface analysis, 9  
Surface chemistry, 1, 9  
Surface morphology, 1  
Surface treatment, 1, 9
- Tensile failure, 65  
Tension properties, 189  
Thermal buckling, 181  
Thermal expansion, 111, 307  
Thermal properties, 345  
Thermal stresses, 307  
Thermo-mechanical loading, 189  
Thick fibres, 201  
Three dimensional composites, 23, 189  
Translaminar cracks, 265  
Transport properties, 221  
Transverse expansion, 65  
Transverse impact, 17  
Transverse strains, 65  
Two dimensional composites, 65, 135
- Uniaxial compression, 125  
Unidirectional composite, 37, 117, 201, 247, 323
- Weave density, 23  
Weft-knit fabric composites, 283  
Wetting of fibres, 335  
Woven fabric laminate, 135  
Woven reinforcement, 161  
Woven structure, 23
- XPS, 1, 9



## Author Index to Volume 45

- Alderson, K. L. 17  
Alfutov, N. A. 189  
Annin, B. D. 241  
Aronsson, C. G. 43
- Bazhenov, S. L. 201  
Beliaev, S. M. 229  
Berlin, A. A. 201  
Bouette, B. 313
- Cazeneuve, C. 313  
Chai, G. B. 125  
Chang, J. S. 55  
Chen, C. H. 335, 345  
Chen, C. S. 1  
Chen, H. C. 23, 283  
Chen, H. E. 23  
Chou, S. 23, 283  
Ciu, W. C. 323  
Clough, R. B. 73
- Demakos, C. B. 293  
Dharani, L. R. 117  
Domnanovitch, A. 65  
Dupuy, R. A. 117
- Evans, K. E. 17
- Faillard, P. 247  
Farouk, A. 265  
French, M. A. 257
- Ganesh, V. K. 135
- Harding, J. 161  
Hoon, K. H. 125
- Jiang, K. R. 89
- Kazmin, V. I. 209  
Khvostunkov, A. A. 221  
Kim, J. K. 153  
Kromp, K. 65  
Kromp, W. 65  
Kuperman, A. M. 201
- Lai, C. A. 283  
Lai, J. Y. 1, 9  
Langrana, N. A. 265  
Li, Y. L. 161
- Ma, C. C. M. 335, 345  
Mai, Y. W. 153  
Manor, A. 73  
Marais, C. 247  
Mileiko, S. T. 209  
Mykura, H. 307  
Mykura, N. 307
- Naik, N. K. 135
- Oytana, C. 313
- Partsevsky, V. V. 229  
Penn, L. S. 89  
Peterlik, H. 65  
Pritchard, G. 257
- Rohwer, K. 181
- Sadovsky, V. M. 241  
Selyanin, O. S. 189  
Shyu, S. S. 1, 9  
Speransky, M. I. 229  
Stepanov, A. K. 221
- Theocaris, P. S. 293  
Toll, S. 43  
Tvardovsky, V. V. 221
- Venkatakrishnaiah, S. 117
- Wilczynski, A. P. 37  
Wisnom, M. R. 323
- Yao, W. X. 105  
Yuan, L. Y. 1, 9
- Zabolotsky, A. A. 233  
Zelenskii, E. S. 201  
Zhou, L. M. 153  
Zinov'ev, P. A. 189

